

What Is Claimed Is:

1. A fixing device comprising a fixing belt module composed of a fixing roller having a heat source, one or more tension rollers at a fixing side and an endless fixing belt looped and stretched around the rollers to thereby rotate and a pressure belt module including an endless pressure belt that comes in contact with an outer peripheral surface of the fixing belt only within a range of a section where the fixing belt is wrapped around a surface of the fixing roller, thereby forming a nip section for fixation between itself and the fixing belt,

wherein the fixing belt module includes a fixing belt heating unit that heats an inner peripheral surface and/or the outer peripheral surface of the fixing belt at any sections other than the section where the fixing belt is wrapped around the outer peripheral surface of the fixing roller.

2. The fixing device according to Claim 1, wherein the fixing roller has at least an elastic layer formed on the peripheral surface of a cylindrical member.

3. The fixing device according to Claim 1, wherein at least one of the tension rollers at the fixing side in the fixing belt module has a heat source disposed therein for serving as the fixing belt heating unit.

4. The fixing device according to Claim 1, wherein two or more of the tension rollers are provided at the fixing side, the fixing belt is wrapped for causing at least one of the tension rollers to be in contact with the outer peripheral surface of the fixing belt and at least one of the tension rollers at the fixing side has a heat source disposed therein for serving as the fixing belt heating unit.

5. The fixing device according to Claim 1, wherein the pressure belt module further includes a pressure roller and one or more pressing-side tension rollers, and the pressure belt rotates as stretched by the rollers;

the pressure roller is urged toward the surface of the fixing roller via the pressure belt and the fixing belt; and

a predetermined length of the pressure belt toward an upstream side in its rotating direction from a section of the pressure belt that is urged toward the surface of the fixing roller by the pressure roller is pressed and wrapped around the outer peripheral surface of the fixing belt at the section wrapped around the fixing roller, thereby forming a nip section for fixation between the fixing belt and the pressure belt.

6. The fixing device according to Claim 5, wherein

the nip section for fixation is preferably formed at the upstream side of the fixing belt within the range of the section around which the fixing belt is wrapped.

7. The fixing device according to Claim 5, wherein the pressure belt module includes a pressure member that is urged toward the surface of the fixing roller via the pressure belt from an inner periphery of the pressure belt and at an upstream side in a rotating direction of the pressure belt with respect to the pressure roller.

8. The fixing device according to Claim 7, wherein the pressure member is formed into a pad shape.

9. The fixing device according to Claim 5, wherein at least one of the pressing-side tension rollers is preferably provided with a belt edge position detecting mechanism for detecting a position of a belt edge of the pressure belt now rotating and a shaft shifting mechanism for shifting a position where the belt is in contact in a shaft direction of the roller according to a detected result of the belt edge detecting mechanism.

10. The fixing device according to Claim 1, wherein the pressure belt module further includes a pad-shaped pressure member that is arranged so as to be in contact with the inner periphery of the pressure belt that is

in a free state without being stretched, wherein

the pressure member is urged toward the surface of the fixing roller via the pressure belt and the fixing belt and a predetermined length of the pressure belt is pressed and wrapped around the outer peripheral surface of the fixing belt at the section wrapped around the outer periphery of the fixing roller, thereby forming the nip section for fixation between the fixing belt and the pressure belt.

11. The fixing device according to Claim 10, wherein the nip section for fixation is preferably formed at the upstream side in a rotating direction of the fixing belt within the range of the section around which the fixing belt is wrapped.

12. The fixing device according to Claim 10, wherein nip pressure of the pressure member for pressing the fixing roller is locally increased at the vicinity of an outlet of the nip section.

13. The fixing device according to Claim 12, wherein the fixing roller has at least an elastic layer formed on the peripheral surface of the cylindrical member, and the elastic layer formed on the fixing roller has deformation due to the urging of the pressure member toward the surface of the fixing roller.

14. The fixing device according to Claim 10, wherein the pressure belt module is provided with a belt edge guide for controlling a shift of the pressure belt in a shaft direction of a rotational shaft of the pressure belt.

15. The fixing device according to Claim 1, wherein at least one of the pressing-side tension rollers is provided with a belt edge position detecting mechanism of the fixing belt and a shaft shifting mechanism for shifting a position where the fixing belt is in contact in the shaft direction of the roller according to the detected result of the belt edge detecting mechanism.

16. An image forming device comprising at least an unfixed toner image forming unit that adheres toner image-wise on a surface of a recording medium to form an unfixed toner image and a fixing unit that fixes the unfixed toner image carried on the surface of the recording medium by applying heat and pressure,

wherein the fixing unit having a fixing belt module composed of a fixing roller having a heat source, one or more tension rollers at a fixing side and an endless fixing belt looped and stretched around the rollers to thereby rotate and a pressure belt module including an endless pressure belt that comes in contact with an outer

peripheral surface of the fixing belt only within a range of a section where the fixing belt is wrapped around a surface of the fixing roller, thereby forming a nip section for fixation between itself and the fixing belt, wherein the fixing belt module includes a fixing belt heating unit that heats an inner peripheral surface and/or the outer peripheral surface of the fixing belt at any sections other than the section where the fixing belt is wrapped around the outer peripheral surface of the fixing roller.